What is claimed is:

1. A color image processing apparatus comprising:

object color designating means for designating an object color to be converted in an input color image;

optimum color setting means for setting an optimum color corresponding to said object color designated by said object color designating means;

lightness conversion factor obtaining means for obtaining a lightness conversion factor based on said object color and said optimum color; and

lightness converting means for converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

2. A color image processing apparatus according to claim 1, wherein:

said lightness converting means converts said object color in lightness using said lightness conversion factor to create a lightness-changed object color; and

said apparatus further comprises hue and chroma converting means for converting said lightness-changed color image in hue and chroma based on a color difference between said lightness-changed object color and said optimum color.

3. A color image processing apparatus according to claim 1, wherein:

said object color designating means designates a plurality of object colors;

said optimum color setting means sets a plurality of optimum colors respectively corresponding to the plural object colors; and

said lightness conversion factor obtaining means obtains a plurality of individual lightness conversion factors respectively corresponding to said plural object colors and said plural optimum colors, and also obtains an average weighting value of said plural individual lightness conversion factors as said lightness conversion factor, using weighting factors respectively corresponding to said plural optimum colors.

4. A color image processing apparatus according to claim 2, wherein:

said object color designating means designates a plurality of object colors;

said optimum color setting means sets a plurality of optimum colors respectively corresponding to the plural object colors; and

said lightness conversion factor obtaining means obtains a plurality of individual lightness conversion factors respectively corresponding to said plural object colors and said plural optimum colors, and also obtains an average weighting value of said plural individual lightness conversion factors as said lightness conversion factor, using weighting

factors respectively corresponding said plural optimum colors.

5. A color image processing apparatus according to claim 1, wherein:

said apparatus further comprises an optimum color database previously retaining color values of various optimum colors; and

said optimum color setting means sets said optimum color corresponding to said object color as selected from said optimum color database.

6. A color image processing apparatus according to claim 2, wherein:

said apparatus further comprises an optimum color database previously retaining color values of various optimum colors; and

said optimum color setting means sets said optimum color corresponding to said object color as selected from said optimum color database.

7. A color image processing apparatus according to claim 3, wherein:

said apparatus further comprises an optimum color database previously retaining color values of various optimum colors and also weighting factors corresponding to the individual optimum colors;

said optimum color setting means sets more than one

optimum colors respectively corresponding to said plural object colors as selected from said optimum color database; and

said lightness conversion factor obtaining means reads out more than one weighting factors corresponding to the individual optimum colors from said optimum color database.

8. A color image processing apparatus according to claim 4, wherein:

said apparatus further comprises an optimum color database previously retaining color values of various optimum colors and also weighting factors corresponding to the individual optimum colors;

said optimum color setting means sets more than one optimum colors respectively corresponding to said plural object colors as selected from said optimum color database; and

said lightness conversion factor obtaining means reads out more than one weighting factors corresponding to the individual optimum colors from said optimum color database.

9. A computer-readable recording medium in which a color image processing program is recorded, wherein said color image processing program instructs a computer to function as the following:

object color designating means for designating an object color to be converted in an input color image;

optimum color setting means for setting an optimum color corresponding to said object color designated by said object

color designating means;

lightness conversion factor obtaining means for obtaining a lightness conversion factor based on said object color and said optimum color; and

lightness converting means for converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

10. A computer-readable recording medium according to claim 9, wherein:

said color image program said lightness converting means converts said object color in lightness using said lightness conversion factor to create a lightness-changed object color; and

said color processing program further instructs the computer to function as hue and chroma conversion means for converting said lightness-changed color image in hue and chroma based on a color difference between said lightness-changed object color and said optimum color.

11. A computer-readable recording medium according to claim 9, wherein:

said object color designating means designates a plurality of object colors;

said optimum color setting means sets a plurality of optimum colors respectively corresponding to the plural object colors; and

said lightness conversion factor obtaining means obtains a plurality of individual lightness conversion factors respectively corresponding to said plural object colors and said plural optimum colors, and also obtains an average weighting value of said plural individual lightness conversion factors as said lightness conversion factor, using weighting factors respectively corresponding to said plural optimum colors.

12. A computer-readable recording medium according to claim 10, wherein:

said object color designating means designates a plurality of object colors;

said optimum color setting means sets a plurality of optimum colors respectively corresponding to the plural object colors; and

said lightness conversion factor obtaining means obtains a plurality of individual lightness conversion factors respectively corresponding to said plural object colors and said plural optimum colors, and also obtains an average weighting value of said plural individual lightness conversion factors as said lightness conversion factor, using weighting factors respectively corresponding to said plural optimum colors.

13. A color image processing method comprising the steps of:

(a) designating an object color to be converted in an input color image;

(b) setting an optimum color corresponding to said object color designated by said designating step (a);

(c) obtaining a lightness conversion factor based on said object color and said optimum color; and

(d) converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

14. A color image processing method according to claim 13, wherein:

in said lightness converting step (d), said object color is converted in lightness, using said lightness conversion factor, to create a lightness-changed object color; and

said method further comprises a step of converting said lightness-changed color image in hue and chroma based on a color difference between said lightness-changed object color and said optimum color.

15. A color image processing method according to claim 13, wherein:

in said object color designating step (a), a plurality of object colors are designated;

in said optimum color setting step (b), a plurality of optimum colors respectively corresponding to the plural object colors are set; and

in said lightness conversion factor obtaining step (c), a plurality of individual lightness conversion factors respectively corresponding to said plural object colors and said plural optimum colors are obtained, and then an average weighting value of said plural individual lightness conversion factors is obtained as said lightness conversion factor using weighting factors respectively corresponding to said plural optimum colors.

16. A color image processing method according to claim 14, wherein:

in said object color designating step (a), a plurality of object colors are designated;

in said optimum color setting step (b), a plurality of optimum colors respectively corresponding to the plural object colors are set; and

in said lightness conversion factor obtaining step (c), a plurality of individual lightness conversion factors respectively corresponding to said plural object colors and said plural optimum colors are obtained, and then an average weighting value of said plural individual lightness conversion factors is obtained as said lightness conversion factor using weighting factors respectively corresponding to said plural optimum colors.

17. A color image processing apparatus comprising:

object color designating means for designating an object

color to be converted in an input color image;

optimum color setting means for setting an optimum color corresponding to said object color designated by said object color designating means;

preliminary lightness conversion amount obtaining means for obtaining a preliminary lightness conversion amount in accordance with a differential value in lightness between said object color and said optimum color;

practical lightness conversion amount obtaining means for obtaining a practical lightness conversion amount by compensating said preliminary lightness conversion amount so as to decrease said preliminary lightness conversion amount commensurate with the largeness of said preliminary lightness conversion amount;

lightness conversion factor obtaining means for obtaining a lightness conversion factor based on said practical lightness conversion amount, said object color and said optimum color; and

lightness converting means for converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

18. A color image processing apparatus according to claim 17, wherein said practical lightness conversion amount obtaining means obtains said lightness conversion amount such as to approximate a predetermined value as said preliminary lightness conversion amount increases.

19. A color image processing apparatus according to claim 17, further comprising preliminary lightness converting means for preliminarily converting the input color image in lightness, based on a histogram or a maximum/minimum/average value of pixel information in the input color image, to create a preliminary amended-lightness color image as the color image.

20. A color image processing apparatus according to claim 18, further comprising preliminary lightness converting means for preliminarily converting the input color image in lightness, based on a histogram or a maximum/minimum/average value of pixel information in the input color image, to create a preliminary amended-lightness color image as the color image.

21. A computer-readable recording medium in which a color image processing program is recorded, wherein said color image processing program instructs a computer to function as the following:

object color designating means for designating an object color to be converted in an input color image;

optimum color setting means for setting an optimum color corresponding to said object color designated by said object color designating means;

preliminary lightness conversion amount obtaining means for obtaining a preliminary lightness conversion amount in accordance with a differential value in lightness between said

object color and said optimum color;

practical lightness conversion amount obtaining means for obtaining a practical lightness conversion amount by compensating said preliminary lightness conversion amount so as to decrease said preliminary lightness conversion amount commensurate with the largeness of said preliminary lightness conversion amount;

lightness conversion factor obtaining means for obtaining a lightness conversion factor based on said practical lightness conversion amount, said object color and said optimum color; and

lightness converting means for converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

22. A computer-readable recording medium according to claim 21, wherein said practical lightness conversion amount obtaining means obtains said lightness conversion amount such as to approximate a predetermined value as said preliminary lightness conversion amount increases.

23. A computer-readable recording medium according to claim 21, wherein said color processing program further instructs the computer to function as preliminary lightness converting means for preliminarily converting the input color image in lightness, based on a histogram or a maximum/minimum/average value of pixel information in the input

color image, to create a preliminary amended-lightness color image as the color image.

24. A computer-readable recording medium according to claim 22, wherein said color processing program further instructs the computer to function as preliminary lightness converting means for preliminarily converting the input color image in lightness, based on a histogram or a maximum/minimum/average value of pixel information in the input color image, to create a preliminary amended-lightness color image as the color image.

25. A color image processing method comprising the steps of:

(a) designating an object color to be converted in an input color image;

(b) setting an optimum color corresponding to said object color designated by said designating step (a);

(c) obtaining a preliminary lightness conversion amount in accordance with a differential value in lightness between said object color and said optimum color;

(d) obtaining a practical lightness conversion amount by compensating said preliminary lightness conversion amount so as to decrease said preliminary lightness conversion amount commensurate with the largeness of said preliminary lightness conversion amount;

(e) obtaining a lightness conversion factor based on said

practical lightness conversion amount, said object color and said optimum color; and

(f) converting the input color image in lightness using said lightness conversion factor to create a lightness-changed color image.

26. A color image processing method according to claim 25, wherein in said practical lightness conversion amount obtaining step (d), said lightness conversion amount such as to approximate a predetermined value is obtained as said preliminary lightness conversion amount increases.

27. A color image processing method according to claim 25, further comprising a step of preliminarily converting the input color image in lightness, based on a histogram or a maximum/minimum/average value of pixel information in the input color image, to create a preliminary amended-lightness color image as the color image.

28. A color image processing method according to claim 26, further comprising a step of preliminarily converting the input color image in lightness, based on a histogram or a maximum/minimum/average value of pixel information in the input color image, to create a preliminary amended-lightness color image as the color image.